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ABSTRACT

Because research indicates that American youth have become fatter since the 1960's, the development of fitness among young children should not be left to chance. Simple games, rhythms, and dance are not sufficient to insure fitness, for, during the regular free play situation, children very seldom experience physical activity of enough intensity to promote cardiovascular fitness. Fortunately, something can be done. The Health-Related Physical Fitness Test, inaugurated in 1980 by the American Alliance for Health, Physical Education, Recreation and Dance, emphasizes a philosophy which focuses upon good health and disease prevention. Aspects of the philosophy include cardiovascular endurance, muscular endurance, flexibility, and balanced body composition. Basic benefits of health-related physical activity are numerous. Included in this document are a guide for planning fitness activities in daily lessons, examples of activities for enhancing fitness among young children, and a weekly plan with illustrative activities. (RH)

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Health-Related Fitness and Young Children

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Health-Related Fitness and Young Children

In 1984 the United States Public Health Service reported the results of a national fitness survey indicating that "American young people have become fatter since the 1960's" (National Children and Youth Fitness Study). Additional research indicates that over 30 percent of our children are overweight and approximately 80 percent of these individuals will become obese adults. Perhaps partially to blame in this situation is belief in the "Baby Fat Myth". The assumption that children will simply "grow out" of their obese condition, is in fact, a myth. Another piece of evidence that maybe somewhat in conflict with popular opinion relates to how hard children play. Gilliam and associates (1982) report that during the regular free play situation, children very seldom experience physical activity of enough intensity to promote cardiovascular fitness. Another myth that sometimes confuses parents and educators is the notion that children (especially the young) have weak hearts and should not be exercised (such as running) vigorously. Numerous scientific studies (Corbin, 1980; Gallahue, 1982) now clearly indicate that a healthy child can not physiologically injure the heart permanently through exercise unless the heart is already weakened. Generally, the same precautions (e.g., footwear, climatic conditions, use of progression) that should be followed by adults apply with children. The author would also like to note that vigorious cardiorespiratory fitness programs are not uncommon with children 4-6 years of age.

Research of this nature is abundantly available to support the need for directing the fitness development of children. The consensus of authorities also indicates that such programs should begin early if they are to be of real value. The life-styles of children should be checked before their 8th birthday. Before this time, modifications in diet and exercise patterns are easier to change than in later years.

During this decade an exciting trend has significantly changed the curriculum for young children's physical education programs; the implementation of the health-related fitness philosophy. In 1980 the American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD) inaugurated the Health-Related Physical Fitness Test. With its inception came a philosophical shift from a skill-related emphasis (e.g., strength, power, speed) to a health-related philosophy which focuses upon good health and disease prevention. Specifically significant to the teacher of young children is the age range and available norms which begin at 5 years (for three of four tests). An extension of the health-related philosophy for young children may also be found in the Texas Physical and Motor Fitness Development Program (1983) for children 5-9 years of age. The following is a summary of components and test items related to the health-related philosophy (AAHPERD, 1980).

HEALTH-RELATED ASPECTS: (fitness which offers some protection against coronary heart disease, obesity and various musculoskeletal disorders):

CARDIOVASCULAR ENDURANCE - The ability of the circulatory and respiratory systems to supply fuel, most importantly oxygen, during sustained physical activity.

MUSCULAR ENDURANCE - The ability of certain muscle groups to exert external force for many repetitions or successive exertions.

FLEXIBILITY - The range of motion available in a joint.

BODY COMPOSITION - Classification of the body into fat weight.

Test Items (appropriate for 5-12 years)

1. Cardiorespiratory function

   Mile run or 9-minute run

2. Body Composition (leanness/fatness)

   Sum of triceps and subscapular skinfolds (norms start at 6 years); triceps skinfold is suggested if only one site is selected

3. Abdominal and low back-hamstring musculosketetal function

   A. Modified, timed sit-ups (60 sec.)

   B. Sit and reach

Basic benefits of health-related physical activity are:

1. Increased physical working capacity.
2. When combined with proper diet, vigorous activity is a positive contributor toward the control of body fat and coronary heart disease.
3. Vigorous activity contributes to the development of skeletal growth through increased mineralization. Inactivity for prolonged periods causes demineralization, thus brittleness in bones.
4. Muscular strength, endurance and flexibility promote good posture and are conducive to efficient movement pattersns.
5. Physical activity results in more energy and thus contributes to greater individual productivity for physical, as well as mental tasks.
6. The development of health-related components contributes to better performance in many skill-related activities (e.g., gymnastics, sports, dance).
7. Being fit helps in the development of a desirable self-concept.

While ideally children should be assessed during the early part of the year, not all situations make this a practical alternative. Nor do the norms and testing procedures accomodate children below the age of 5 years. Many authorities from the medical and physical education professions advocate the implementation of health promotion activities for children 4 years and up. Most important, however, is implementation of the philosophy into the curriculum; utilization of activities that enhance health-related components. As with most instructional planning endeavors, it is believed that the best method for this implementation be a systematic approach. The development of fitness should not be left to chance through "general" (e.g., simple games, rhythms, dance) play activities or recess periods. It is suggested that at least 10 minutes and perferably 15-20 minutes of the period be devoted to fitness enhancement. This practice varies of course, due to individual program characteristics, however the development of fitness should be of primary concern (motor skill development generally accounts for a portion of the alloted time).

In any case, the following guide may be appropriate. The body composition component is not used because of its testing rather than implementation characteristics and the assumption that an optimum level may be a result of the other components as well as a planned diet. The following guide may be used for planning of health-related fitness components (activities) into daily lessons; the rotation continues throughout the yearly plan. The first component on Tues./Thurs. receives primary emphasis.

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Cardio-respiratory	Upper body strength/endur. / Flexibility	Cardio-respiratory	Flexibility / Abdominal strength/endur.	Cardio-respiratory
Cardio-respiratory	Flexibility / Upper body strength/endur.	Cardio-respiratory	Abdominal strengh/endur. / Flexibility	Cardio-respiratory

Examples of activities used to enhance the fitness components may be found in a number of sources (e.g., David & Isaacs, 1986; Dauer & Pangrazi 1986; Kirchner, 1985; Texas Physical and Motor Fitness Development Program, 1983). The following are examples of general activities that have been utilized successfully with young children.

CARDIOVASCULAR

JOGGING/RUNNING
FARTLEK (CHANGE SPEEDS)
AEROBIC DANCE
JUMP ROPE
PARACHUTE PLAY
  (moving rapidly [e.g., running] while holding on)
SWIMMING
BICYCLING

FLEXIBILITY

PARACHUTE PLAY
 (bending/stretching)
DANCE/RHYTHMS
BODY PART STRETCHING
    SHOULDER
    LOWER BACK
    QUADRICEPS
    HAMSTRING
    CALF

MUSCULAR STRENGTH/ ENDURANCE

PARACHUTE PLAY
(shaking arms at various levels; e.g., chest, knees, chin)
ISOMETRICS
PLAYGROUND EQUIPMENT
  BARS
  HORIZONTAL LADDERS
  VERTICAL POLE
  ROPE CLIMB
GYMNASTIC STUNTS
SWIMMING
BICYCLING

A typical plan for a week may contain the following activities.

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
European Running (run to tempo of drum)	Climbing Ropes & Ladders Floor Exercises	Parachute	Movement Stories Gymnastic Stunts	Aerobic Dance

The philosophy and implementation of health-related fitness has great potential to make a significant contribution toward children's wellness and giving recognition to the importance of early childhood "total" development. As with all progressive movements toward excellence, an approach that identifies philosophy, purpose, components and a systematic plan of implementation, affords the greatest chance for success.

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